

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014693**Date Inspected:** 04-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girders (OBG)**Summary of Items Observed:**

Quality Assurance inspector (QA) Michael Foerder was at the American Bridge/Flour (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. OBG Field Splice 5E/6E Face A (Outside) Repairs
2. OBG Field Splice 3W/4W Face F (Inside) FCAW
3. OBG Field Splice 1E/2E Face D

**Field Splice 5E/6E Face A (Outside) Repairs**

The QA inspector periodically observed ABF welding personnel Mitch Sittinger and Fred Kaddu performing shielded metal arc welding (SMAW) for repair areas previously identified by the QC department during ultrasonic testing (UT) of the deck plate. It was noted Mr. Sittinger was performing welding operations at weld numbers A-1, A-2 and one at A-3 with Mr. Kaddu performing repairs primarily at A-3 and A-4 as the shift progressed. QC inspector Steve McConnell was noted to be present in order to monitor the progression of work and adherence to welding procedure specification designated as ABF-WPS-D1.5-1001 Repair. The welding parameters were verified to be within the WPS as observed by the QA inspector with the QC inspector performing the readings periodically. The pre heat and interpass temperatures were within the WPS and the contractor was utilizing helper personnel in order to keep moisture away from the excavations while welding was in process due to misty conditions. After a short time, contractor personnel placed temporary shelters at the welding locations to further assist in keeping the work dry. See digital photo included in the body of this report for clarification. The work progressed throughout the QA inspectors shift with 6 areas completed, which appeared to be in general compliance

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with the contract documents and several places still in process.

## Field Splice 3W/4W Face E-2 (Inside) FCAW

The QA inspector periodically observed the in process Flux Cored Arc Welding (FCAW-G) being performed by ABF welding personnel Song Tao Huang between Y locations designated 4000-5280mm. QC inspector Bernard Docena was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D1.5-3042B-1 and supporting Procedure Qualification Records (PQR). The preheat and interpass temperature was verified by the QC and QA inspector to be within the established WPS and the parameters were verified to be 250 amps, 24 volts with a measured travel speed of 260mm/min. The work alternated between the semi automated welding equipment and manual manipulation as the access in this area is limited in nature. The work progressed throughout the shift, was not completed and appeared to be progressing in general conformance with the contract documents. See digital photo included in the body of this report for general information.

## Field Splice 1E/2E Face D (Outside) Repairs

The QA inspector performed a random visual review of the status of the ultrasonic testing (UT) for this location in which the initial repairs have been completed and the QC department has performed additional UT on a portion of these locations. The QA inspector did not observe any QC inspector performing the UT at the time of review however, several additional areas have been marked for what appears to be rejectable indications. A digital photo is included in the body of this report for general information. The QA inspector inquired from QC inspector Jessie Cayabyab if he was completed with the UT scan and he relayed the review was still in process as additional rejectable indications were discovered during the scan and several areas marked need further evaluation. No remedial work was performed at this location for the QA inspector's shift.

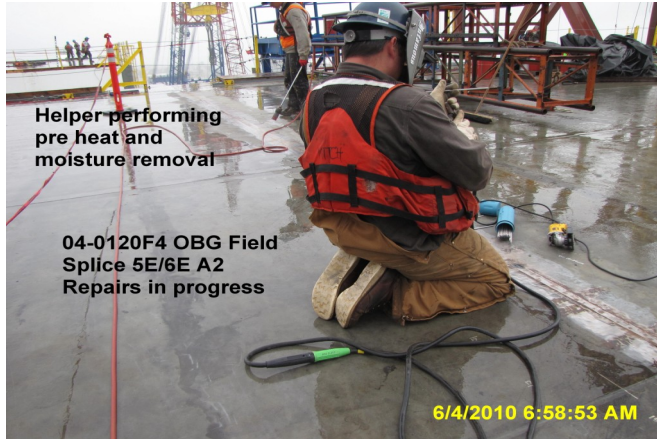


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### Summary of Conversations:

The QA inspector spoke with ABF Engineering Superintendent John Callaghan in which Mr. Callaghan relayed the scaffolding support at 3E/4E side C would be relocated later this shift and was officially notifying QA of this item. The QA inspector relayed no further verification by QA was needed at this location as the items were reviewed prior to the holiday weekend.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)813-3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Foerder, Mike

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer